31                        **AMENDMENTS TO THE CLAIMS**

32     Please amend the claims as follows:
33

34            1. (Presently Amended) A method for use in cable systems, the method for

35     forwarding messages containing cryptographic keys from <u>multiple</u> ~~one or more~~ access sytems

36     that control a population of set-top boxes to an encryption renewal system, the method

37     comprising:

38            storing a <u>single</u> fictitious address of a virtual set-top box,<u> said fictitious</u>

39     <u>address being identical for each of said multiple access systems;</u>

40            generating a ~~first message, based on the fictitious address, the message~~

41     ~~containing a first cryptographic key; and~~<u> unique key within each of said multiple access</u>

42     <u>systems as a funtion of the identity of each particular access system;</u>

43            <u>encrypting said unique key for each of said multiple access systems;</u>

44            <u>encapsulating each of said encrypted unique keys in a message encoded to be</u>

45            <u>forwarded to said single</u>

46            ~~forwarding the first message to the~~ fictitious address ~~of the virtual set-top box.~~

1            2. (Presently Amended) The method of claim 1 further comprising receiving

2     the <u>encoded</u> ~~first~~ message by the encryption renewal system which has information regarding

3     the fictitious address.

1            3. (Presently Amended) The method of claim 1 further comrising deriving by

2     the encryption renewal system the first cryptographic key from the <u>encoded</u> ~~first~~ message.

1            4. (Presently Amended) The method of claim 1 further comprising forwarding

2     to a subscriber set-top box, a control message containing information having the first

3     cryprographic key for allowing the set-top box to decrypt the pre-encrypted content for a

4     designated duration.

1            5. (Presently Canceled) The method of claim 1 wherein the steps of storing,

2     generating and forwarding are performed by a first conditional access system.

1            6. (Presently Canceled) The method of claim 5 wherein the virtual set-top box

2     appears to the first conditional access system as one of the population of set-top boxes within

3     its control.

1          7. (Presently Canceled) The method of claim 5 further comprising,

2          storing, by a second conditional access system, the fictitious address of the

3   virtual set-top box;

4          generating, by the second conditional access system, a second message having

5   a second cryptographic key; and

6          forwarding, by the second conditional access system, the second message to

7   the fictitious address.

1          8. (Presently Canceled) The system of claim 7 wherein the first and second

2   conditional access systems forward the first and second control messages to the same virtual

3   set-top box.

1          9. (Presently Canceled) A conditional access system controlling a population

2   of set-top boxes, the conditional access system comprising:

3          one or more software instructions for storing a virtual set-top box address

4   appearing as part of the population of set-top boxes;

5          one or more software instrutions for generating an entitlement management

6   message having a periodical key for controling both the population of set-top boxes and the

7   virtual set-top box; and

8          one or more software instructions for forwarding the entitlement management

9   message to the virtual set-top box address.

1          10. (Presently Canceled) The conditional access system of claim 9 wherein the

2   virtual set-top box address is unique and no collisions occur with addresses of the population

3   of set-top boxes.

1          11. (Presently Canceled) An encryption renewal system, comprising:

2          one or more software instructions for storing information relating to a virtual

3   set-top address;

4          one or more software instructions for receiving from a first conditional access

5   system a first entitlement management message having a cryptographic key, the entitlement

6   management message being intended for receipt by the virtual set-top address; and

7          one or more software instructions for deriving the cryptographic key from the

8   entitlement management message.

12. (Presently Canceled) The encryption renewal system of claim 11 further
comprising one or more software instructions for determining that the entitlement
management message is from the first conditional access system.

13. (Presently Canceled) The encryption renewal system of claim 11 wherein
the cryptographic key is a first periodical key through which the first conditional access
system controls a first population of set-top boxes.

14. (Presently Canceled) The encryption renewal system of claim 11 further
comprising
    one or more software instructions for receiving from a second conditional
access system a second entitlement management message having a cryptographic key, the
entitlement control message being intended for receipt by the virtual set-top address; and
    one or more software instructions for deriving the cryptographic key from the
entitlement control message.

15. (Presently Canceled) The encryption renewal system of claim 13 further
comprising a second periodical key through which the second conditional access system
controls a second population of set-top boxes.

16. (Presently Canceled) The encryption renewal system of claim 13 further
comprising a database associated with the first conditional access system of a first video on
demand system, and a second conditional access system of a second video on demand
system.

17. (Presently Canceled) The encryption renewal system of claim 13 further
comprising a database for storing the first periodical key of the first conditional access
system, and for storing a second periodical key of a second conditional access system.

18. (Presently Canceled) A conditional access system controlling a population
of set-top boxes, the conditional access system comprising:
    means for storing a virtual set-top box address which appears as part of the
population of set-top boxes;

5       means for generating an entitlement management message having a periodical

6   key through which the conditional access system controls the population of set-top boxes;

7   and

8       means for forwarding the entitlement management message to the virtual set-

9   top box address.

1       19. (Presently Canceled) The conditional access system of claim 9 wherein the

2   virtual set-top box address is unique to prevent collisions.

1       20. (Presently Canceled) An encryption renewal system, comprising:

2       means for storing information relating to a virtual set-top address;

3       means for receiving from a first conditional access system, a first entitlement

4   management message having a cryptographic key, the entitlement control message being

5   intended for receipt by the virtual set-top address; and

6       means for deriving the cryptographic key from the entitlement management

7   message.

1       21. (Presently Canceled) The encryption renewal system of claim 11 further

2   comprising means for determining that the entitlement management message is from the first

3   conditional access system.

1       22. (Presently Canceled)A system for denying access to second pre-encrypted

2   content generated by a compromised off-line encryption device, the system comprising:

3       the off-line encryption device having one or more software instructions for

4   encrypting content to form a first pre-encrypted content and an associated first encryption

5   record having a first time stamp; and

6       an encryption renewal system having

7       one or more software instructions for receiving a signal indicating the

8   first time stamp as a last authorized time stamp,

9       one or more software instructions for receiving a request to access the

10  second pre-encrypted content, the request being accompanied by a second encryption record

11  having a second time stamp; and

12      one or more software instructions for determining whether the second

13  time stamp predates or is contemporaneous to the first time stamp, if yes, granting the request

14    to access the second pre-encrypted content, and if the second time stamp is subsequent to the

15    first time stamp, denying the request to access the second pre-encrypted content.

1          23. (Not Elected) The system of claim 22 wherein the request is for an

2     entitlement control message having information about a periodical key for accessing the

3     second pre-encrypted content.

1          24. (Not Elected) An encryption renewal system for controlling access to pre-

2     encrypted content generated by an encryption device, the system comprising:

3          one or more software instructions for receiving a request to retrofit an

4     entitlement control message that allows a home device to access pre-encrypted content;

5          one or more software instructions for retrofitting the entitlement control

6     message only after verifying that the pre-encrypted content was generated prior to or

7     contemporaneous with a first authorized timestamp.

1          25. (Not Elected) The encryption renewal system of claim 24 wherein the

2     request for the entitlement control message is accompanied by an encryption record having a

3     second time stamp.

1          26. (Not Elected) The encryption renewal system of claim 25 wherein the

2     second time stamp indicates when the pre-encrypted content was generated.

1          27. (Not Elected) An encryption renewal system for controlling access to pre-

2     encrypted content generated by an encryption device, the system comprising:

3          means for receiving a request for an entitlement control message that allows a

4     home device to access pre-encrypted content;

5          means for generating the entitlement control message only after verifying that

6     the pre-encrypted content was generated prior to or contemporaneous with a first authorized

7     timestamp.

1          28. (Not Elected) The encryption renewal system of claim 22 wherein the first

2     encryption record is secured by a cryptographic signature.

1          29. (Not Elected) An offline encryption device comprising:

2          one or more software instructions for generating a first time stamp marking

3     when a first encrypted content is generated; and

4           one or more software instructions for generating a second time stamp marking

5      when a second encrypted content is generated, such that if the first time stamp is last

6      authorized, the second encrypted content is decrypt-able only if the second time stamp is

7      prior to or contemporaneous with the first time stamp.

1           30. (Not Elected) The system of claim 29 further comprising one or more

2      software instructions for generating an encryption record having the first time stamp.

1           31. (Not Elected) The system of 29 further comprising an encryption renewal

2      system for receiving a signal providing that the first time stamp is the last authorized time

3      stamp.

1           32. (Not Elected) The system of claim 30 further comprising a video on

2      demand system for forwarding a request to the encryption renewal system to access the

3      second encrypted content.

1           33. (Not Elected) The system of claim 32 wherein the request is for an

2      entitlement control message for retrofitting the second encrypted content.

1           34. (Not Elected) An offline encryption device comprising:

2           means for generating a first time stamp marking when a first encrypted content

3      is generated; and

4           means for generating for generating a second time stamp marking when a

5      second encrypted content is generated, such that if the first time stamp is last authorized, the

6      second encrypted content is decrypt-able only if the second time stamp is prior to or

7      contemporaneous with the first time stamp.

35. (Not Elected) The system of claim 29 further comprising means for
generating an encryption record having the first time stamp.